Killarney (North) Overview

Volunteer monitoring was carried out in the north arm of Lake Killarney in 2004. The data indicate that this part of the lake is higher in productivity than the main basin, being distinctly above the threshold of eutrophy and having fair water quality.

The Lake Killarney public boat launch is located in the north end, and lake users should keep an eye on aquatic plants growing nearshore to catch early new infestations.

Physical Parameters

Secchi transparency ranged between 1.1 and 1.9 m from January through October, averaging 1.4 m which is distinctly less clear than the south basin, which averaged 2.3 m. Surface water temperatures ranged between 15.0 and 25.0 degrees Celsius for the same period, with the maximum just 0.5 degrees cooler than at the main station.

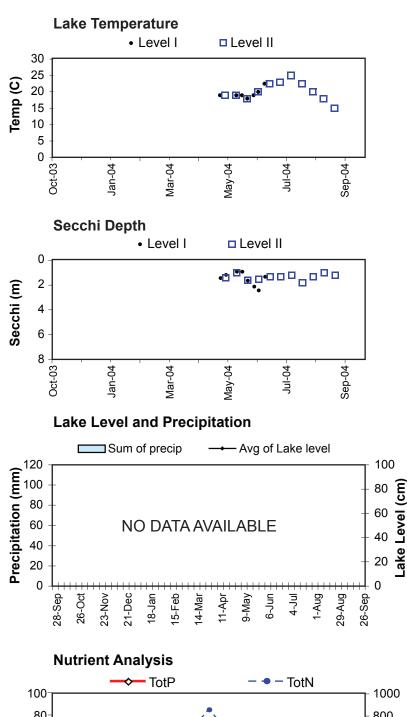
There were no water level or precipitation values recorded.

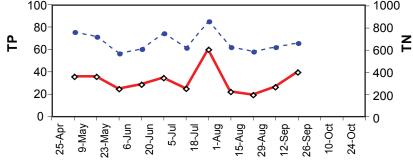
Nutrient Analysis and TSI Ratings

Total phosphorus and total nitrogen remained generally in similar proportion to each other, though more variable than in the main basin of the lake. The N:P ratio ranged from 14 to 30, averaging 22 which suggested there probably were good conditions for nuisance bluegreen growth at times during the sampling season.

Profile data were taken only in May and were consistent with the main basin data.

The 2004 TSI values were close to each other above the threshold of eutrophy.

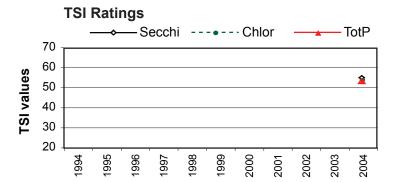




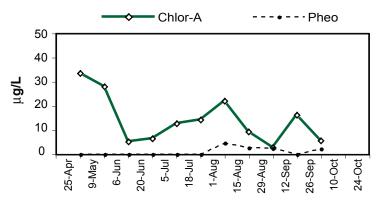
Chlorophyll Concentrations and Algae

Chlorophyll content was highest in May, declined in June and then rose to a peak in early August, declined again and peaked in September. No samples were taken in October. Common algae in the phytoplankton community throughout the season included several species of the chrysophyte *Dinobryon*, the colonial bluegreens *Anacystis* and *Snowella*, and a variety of cryptophyte taxa.

Date	Secchi	depth-m	degC	Chlor-A	TP µg/L	TN µg/L
5/23/04	1.1	1	19.0	28.00	35.5	717
		2.5	19.0	28.50	35.8	597
8/29/04	1.4	1	20.0	2.90	19.2	585



Chlorophyll a Concentrations (ug/L)



Common Algae	Group			
Dinobryon spp	Chrysophyta			
unidentified single cells	Chrysophyta			
Cryptomonas sp	Cryptophyta			

2004 Level I Data

	Summary										
Week of	precip. (mm)	# of	Avg of lake level (cm)	# of days	Sample date	Sample time	Secchi (m)	Temp (°C)	Algae* (Shore)	Algae* (at site)	Goose Count*
28-Sep-03	(111111)	days	lever (citi)	uays	Sample date	unie	(111)	(0)	(Shore)	(at site)	Count
5-Oct-03											
12-Oct-03											
19-Oct-03											
26-Oct-03											
2-Nov-03											
9-Nov-03											
16-Nov-03											
23-Nov-03											
30-Nov-03											
7-Dec-03											
14-Dec-03											
21-Dec-03											
28-Dec-03											
4-Jan-04											
11-Jan-04											
18-Jan-04					11						
25-Jan-04					11						
1-Feb-04					11						
8-Feb-04 15-Feb-04			-		H						
22-Feb-04											
29-Feb-04											
7-Mar-04											
14-Mar-04			-								
21-Mar-04											
28-Mar-04											
4-Apr-04											
11-Apr-04											
18-Apr-04											
25-Apr-04									DO		
2-May-04				_	2-May-04	14:00	1.5	19.0	P3	P3	
9-May-04	5.1	6	64.7	6	9-May-04	14:30	1.3		P3	P3	
16-May-04	1.3	5	63.0	5							
23-May-04	45.7	6	60.5	6	23-May-04	14:30	1.0	19.0	P3	P3	-
30-May-04	5.1	7	61.1	7	30-May-04	14:30	1.0	19.0	P3	P3	
6-Jun-04	14.0	7	58.9	7	6-Jun-04	20:00	1.7	18.0		P2	
13-Jun-04	10.2	7	56.5	6	14-Jun-04	20:00	2.2	19.0		P2	
20-Jun-04	0.0	7	53.0	4	20-Jun-04	20:00	2.5	20.0		P2	
27-Jun-04	0.0	4	49.0	2	28-Jun-04	20:00	1.4	22.5		P3	-
4-Jul-04											
11-Jul-04					11						
18-Jul-04					11						
25-Jul-04					11						
1-Aug-04					11						
8-Aug-04					11						
15-Aug-04					H						
22-Aug-04					H						
29-Aug-04					11						
5-Sep-04					11						
12-Sep-04					H						
19-Sep-04											
26-Sep-04											
Min	0.0		49.0		П	Min	1.0	18.0			
Max	45.7		64.7		11	Max	2.5	22.5			
Total	81.3										

^{*} See introduction for discussion of algae assessment and goose count methods.

2004 Level II Data

		Secchi	Chl-a			Algae		Calculated TSI		
Date (2004)	Temp (°C)	(m)	(μg/l)	TP (μg/l)	TN (μg/l)	Obsv.	N:P	Secc	chl-a	TP
25-Apr										
9-May	19.0	1.5	33.60	35.7	759	3	21	54.1	65.0	55.7
23-May	19.0	1.1	28.00	35.5	717	3	20	58.6	63.3	55.6
6-Jun	18.0	1.7	5.21	24.7	567	2	23	52.3	46.8	50.4
0-Juli	10.0	1.7	5.21	24.7	307	2	23	52.5	40.0	50.4
20-Jun	20.0	1.6	6.57	28.6	607	2	21	53.2	49.0	52.5
5-Jul	22.5	1.4	12.70	34.4	750	3	22	55.1	55.5	55.2
18-Jul	23.0	1.4	14.30	25.0	618	1	25	55.1	56.7	50.6
4 4	25.0	4.2	22.40	FO 0	050	2	4.4	F0.0	60.0	62.0
1-Aug	25.0	1.3	22.10	59.8	856	3	14	56.2	60.9	63.2
15-Aug	22.5	1.9	9.29	22.0	625	2	28	50.7	52.4	48.7
J										
29-Aug	20.0	1.4	2.88	19.2	585	1	30	55.1	40.9	46.8
12-Sep	18.0	1.1	16.30	26.2	625	3	24	58.6	58.0	51.3
						_				
26-Sep	15.0	1.3	5.61	39.6	662	3	17	56.2	47.5	57.2
10-Oct										
10 000										
24-Oct										
	_	Secchi	Chl-a	(n)	 (1)		N.D	Calculated T		
	Temp (°C)	(m)	(μg/l)	TP (μg/l)	TN (μg/l)	Algae	N:P	Secc	chl-a	TP
Mean	20.2	1.4	14.2	31.9	670.1	2.4	22	55.1	54.2	53.4
Median	20.0	1.4	12.7	28.6	625.0	3	22	55.1	55.5	52.5
Min	15.0	1.1	2.9	19.2	567.0	1	14	50.7	40.9	46.8
Max	25.0	1.9	33.6	59.8	856.0	3	30	58.6	65.0	63.2
Count	11	11	11	11	11	11	11	11	11	11

TSI Average = 54.2